

REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

By the above amendments, claim 15 has been amended to recite that the composition comprises from 8% to 35% by weight of the compounds F1, F2 and F3. Support for such amendment can be found at least in the recited ranges of the amounts of compounds F1, F2 and F3. Claims 26 and 27 have been amended for readability purposes. Claim 29 has been amended to depend from claim 28.

In the Official Action, claims 15 and 20-32 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The rejection of claim 15 is moot in view of the above amendments, in which such claim has been amended to recite that the composition comprises from 8% to 35% by weight of the compounds F1, F2 and F3. The rejection of claim 29 is moot in view of the above amendments, in which such claim has been amended to depend from claim 28. Accordingly, for at least the above reasons, withdrawal of the §112 rejection is respectfully requested.

Claims 15, 20-26 and 30-32 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,255,371 (*Schlosser et al*) in view of U.S. Patent Application Publication No. 2002/0151625 (*Yakabe et al*). Claims 28 and 29 stand rejected under 35 U.S.C. §103(a) as being obvious over *Schlosser et al* and *Yakabe et al*, and in view of Hawley's Condensed Chemical Dictionary (*Lewis*) and U.S. Patent No. 3,865,760 (*Pitts et al*). Claim 27 stands rejected under 35 U.S.C. §103(a) as being obvious over *Schlosser et al* and *Yakabe et al*, and in view of U.S. Patent No. 6,433,045 (*Hanabusa et al*). Withdrawal of the above rejections is respectfully requested for at least the following reasons.

Independent claim 15 recites a composition based on a thermoplastic matrix comprising a flame-retardant system. The composition comprises from 8% to 35% by weight of the compounds F1, F2 and F3; from 5 to 15% by weight of compound F1; from 2 to 10% by weight of compound F2; from 1 to 10% by weight of compound F3, with respect to the total weight of the composition.

Schlosser et al does not disclose or suggest each feature recited in independent claim 15. For example, *Schlosser et al* does not disclose or suggest a composition that comprises from 2 to 10% by weight of compound F2, and from 1 to 10% by weight of compound F3, with respect to the total weight of the composition, as recited in claim 15. Such deficiencies of *Schlosser et al* have been acknowledged by the Patent Office at page 5 of the Official Action.

By comparison, *Schlosser et al* discloses the use of a component B, "condensation products of melamine and/or reaction products of melamine with phosphoric acid and/or reaction products of condensation products of melamine with phosphoric acid and/or...a mixture of these". See col. 2, lines 8-12. *Schlosser et al* also discloses a weight percentage of the total component B content. However, *Schlosser et al* fails to have any recognition or suggestion of the specific ranges of components F2 and F3 individually, as currently claimed. Nor does *Schlosser et al* have any recognition or suggestion of the surprising and unexpected results which can be attained by employing both of compounds F2 and F3 within the claimed ranges such as, for example, an improved resistance to forming a flame following the application of a glow wire in accordance with a GWIT test (as discussed at pages 13-14 of the instant specification). The exemplary advantageous effects of a flame-retardant system in accordance with an exemplary aspect are discussed in greater detail below.

The Patent Office has relied on *Yakabe et al* for disclosing the use of specific amounts of a melamine phosphate. See Official Action at page 5. However, like *Schlosser et al*, *Yakabe et al* fails to have any recognition or suggestion of the **surprising and unexpected** results which can be attained by employing both of compounds F2 and F3 within the claimed ranges, in the flame-retardant system. In Table 1 at page 15 of the instant specification, various characteristics of a comparative composition (Example A) and inventive compositions (Examples 1 to 4) were measured. Comparative Example A employed amounts of compounds F1 and F2, but not compound F3. Each of inventive Examples 1 to 4 employed compounds F1, F2 and F3 in amounts within the claimed ranges. As can be seen from the experimental results set forth in Table 1, each of the inventive examples passed the GWIT test which, as discussed above, measures the resistance to forming a flame following the application of a glow wire. Comparative Example A, on the other hand, failed the GWIT test. *Schlosser et al* and *Yakabe et al* have no mention of the GWIT performance of their flame retardant materials. Moreover, there is nothing in such documents which would have led an ordinarily skilled artisan to believe that the incorporation of melamine polyphosphate in the amounts disclosed by *Yakabe et al* would have resulted in an improvement in the GWIT performance of the *Schlosser et al* material.

For at least the above reasons, Applicants respectfully but strenuously submit that independent claim 15 is non-obvious over *Schlosser et al* and *Yakabe et al*.

The other secondary applied documents (i.e., *Lewis*, *Pitt et al* and *Hanabusa et al*) fail to cure the above-described deficiencies of *Schlosser et al*. In this regard, the Patent Office has relied on *Lewis* for disclosing a definition of the term "chalk". See Official Action at page 7. *Pitt et al* has been relied on for disclosing properties of calcium carbonate. See Official Action at page 7. *Hanabusa et al* has been relied on

by the Patent Office for disclosing a fire retardant composition comprising specific inorganic fillers. See Official Action at page 8. Even if the above secondary applied documents would have been combined with *Schlosser et al* in the manner suggested by the Patent Office, the resulting combination nevertheless fails to disclose or suggest a composition that comprises from 2 to 10% by weight of compound F2, and from 1 to 10% by weight of compound F3, with respect to the total weight of the composition, as recited in claim 15.

Accordingly, for at least the above reasons, withdrawal of the above §103(a) rejections is respectfully requested.

The dependent claims are allowable at least by virtue of their direct or indirect dependence from independent claim 15. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.


From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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Date: April 19, 2010

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